

Appl. No. 09/974,919
Amdt. dated March 17, 2005
Reply to Office Action of 10/20/04

PATENT
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IN THE CLAIMS

Amendments to the Claims:

1. (Currently Amended) An apparatus for selectively interconnecting a plurality of ports, comprising:
 - a cross-bar switch, having a plurality of bi-directional data ports; and
 - a controller, operable to control said cross-bar switch to interconnect any two of said plurality of bi-directional data ports by selectively enabling a control output associated with the interconnection of the two of said plurality of bi-directional data ports,wherein said cross-bar switch includes a plurality of digital buffers.
2. (Original) The apparatus in Claim 1 wherein said plurality of bi-directional ports are adapted to interconnect RS-232 ports.
3. (Canceled)
4. (Original) An apparatus, comprising:
 - first, second, and third interfaces each having an input and an output;
 - an interface controller having a first, second, and third control outputs, and operable to enable any one of said outputs individually;
 - a first, second, third, fourth, fifth, and sixth buffer, each having an input, an output, and a control input, and wherein said control inputs enable and disable the coupling of signals through said buffers, and wherein
 - said output of said first and second buffers are coupled to said input of said first interface;
 - said outputs of said third and fourth buffers are coupled to said input of said second interface;
 - said outputs of said fifth and sixth buffers are coupled to said input of said third interface;
 - said output of said first interface is coupled to said input of said fourth and fifth buffer;

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said output of said second interface is coupled to said inputs of said first and sixth buffers;

said output of said third interface is coupled to said inputs of said second and third buffers;

said first control output is coupled to said control inputs of said first and fourth buffers;

said second control output is coupled to said control inputs of said third and sixth buffers, and

said third control output is coupled to said control inputs of said second and fifth buffers.

5. (Currently Amended) The apparatus of Claim 4 ~~3~~ including means for disabling said control inputs by settings said outputs of said buffers to a high impedance state, and wherein said interface controller is operable to disable all of said control outputs.

6. (Currently Amended) The apparatus of Claim 4 ~~3~~ wherein said interfaces are serial port interfaces.

7. (Original) The apparatus of Claim 6 wherein said serial port interfaces are RS-232 serial port interfaces.

8. (Original) The apparatus of Claim 6 wherein said output of said serial port interface is a transmit data output, and said input of said serial port interface is a receive data input.

9. (Original) The apparatus of Claim 7 wherein said output of said serial port interface is a request to send output, and said input of said serial port interface is a clear to send input.

10. (Original) The apparatus of Claim 4 wherein said interface controller is incorporated into one of said interfaces.

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11. (Original) An apparatus, comprising:
a plurality of n interfaces, each having an input and an output;
a plurality of $n(n-1)$ buffers, each having an input, an output, and a control input,
and wherein said control inputs enable and disable the coupling of signals through said buffers,
respectively;
an interface controller having a plurality of $({}_nC_2)$ control outputs, and operable to
enable any one of said plurality of outputs individually, and wherein
said outputs of a unique $(n-1)$ of said plurality of buffers are coupled to said input
of each one of said plurality of interfaces;
every one of said outputs of said plurality of interfaces is uniquely coupled to said
input of one of said $(n-1)$ plurality of buffers that are coupled to said inputs of every other of said
plurality of interfaces, such that said output of every interface is coupled to said input of every
other interface through a unique one of said plurality of buffers, and
each one of said plurality of control outputs is coupled to said control inputs of the
two of said plurality of buffers that couples a unique pair of the $({}_nC_2)$ combinations of said
interface inputs and outputs.

12. (Currently Amended) The apparatus of Claim 11 wherein disabling said
control inputs includes settings said outputs of said plurality of buffers to a high impedance state,
and wherein said interface controller is operable to disable all of said plurality of control outputs.

13. (Original) The apparatus of Claim 11 wherein said plurality of interfaces
are serial port interfaces.

14. (Original) The apparatus of Claim 13 wherein said serial port interfaces
are RS-232 serial port interfaces.

15. (Original) The apparatus of Claim 13 wherein said output of said serial
port interface is a transmit data output, and said input of said serial port interface is a receive data
input.

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16. (Original) The apparatus of Claim 14 wherein said output of said serial port interface is a request to send output, and said input of said serial port interface is a clear to send input.

17. (Original) The apparatus of Claim 11 wherein said interface controller is incorporated into one of said interfaces.